

The following remarks from the Corpus Christi Daily Caller of August 31 referred to the work of the Bureau in connection with this storm:

On account of boisterous seas and unfavorable weather reports, the *Grey Fox* yesterday hugged Central Pier, not venturing forth on her customary visit to Tarpon. Several other boats, mostly fishing craft, were deterred from sailing by the red flags floating from the United States signal pole. This is one of many concrete examples of the value of the Weather Bureau.

The international weather charts prepared daily at the Central Office showed unusual weather conditions over many parts of the Northern Hemisphere during the week that ended the 28th. Stormy weather prevailed much of the week over Europe and the British Isles, and a disturbance of marked intensity passed eastward through Siberia to the Bering Sea.

On the 28th the following weekly forecast was issued.

The distribution of barometric pressure over the Northern Hemisphere is such as to indicate that temperatures near or below the normal will prevail over the greater part of the United States during the week beginning the 29th. A disturbance will appear in the Northwest Monday or Tuesday and move eastward, attended and preceded by unsettled, showery weather and rising temperature, and reach the Atlantic States by the latter part of the week. This disturbance will be followed by cooler, with a probability of frosts in the Northwest. Unsettled weather is indicated for the first part of the week along the south Atlantic and Gulf coasts.

Rains occurred over practically all parts of the country in connection with this disturbance, and showers on several days in the far Northwest extinguished the forest fires that were in progress in that region. Light frosts and freezing temperatures were reported from the northwest during the first part of the week.

#### Average relative humidity and departures from the normal.

Districts.	Average.	Departure from the normal.	Districts.	Average.	Departure from the normal.
New England.....	80	- 2	Missouri Valley.....	69	+ 2
Middle Atlantic.....	78	+ 7	Northern slope.....	53	+ 1
South Atlantic.....	85	+ 3	Middle slope.....	66	+ 7
Florida Peninsula.....	81	+ 1	Southern slope.....	59	- 2
East Gulf.....	79	- 1	Southern Plateau.....	48	+ 6
West Gulf.....	72	- 3	Middle Plateau.....	58	+ 5
Ohio Valley and Tennessee.....	71	- 1	Northern Plateau.....	33	- 10
Lower Lakes.....	69	- 2	North Pacific.....	76	+ 9
Upper Lakes.....	75	0	Middle Pacific.....	56	- 11
North Dakota.....	65	+ 1	South Pacific.....	63	- 3
Upper Mississippi Valley.....	70	0			

#### Average cloudiness and departures from the normal.

Districts.	Average.	Departure from the normal.	Districts.	Average.	Departure from the normal.
New England.....	5.4	+ 0.4	Missouri Valley.....	4.5	+ 0.4
Middle Atlantic.....	5.8	+ 0.7	Northern slope.....	4.3	+ 0.4
South Atlantic.....	5.9	+ 0.7	Middle slope.....	4.8	+ 1.0
Florida Peninsula.....	5.3	0.0	Southern slope.....	3.9	0.0
East Gulf.....	5.0	- 0.2	Southern Plateau.....	3.6	- 0.1
West Gulf.....	3.9	- 0.1	Middle Plateau.....	2.9	- 0.4
Ohio Valley and Tennessee.....	4.4	- 0.1	Northern Plateau.....	2.0	- 0.3
Lower Lakes.....	4.7	+ 0.1	North Pacific.....	5.1	- 0.2
Upper Lakes.....	5.7	+ 1.0	Middle Pacific.....	3.4	0.0
North Dakota.....	4.9	+ 0.9	South Pacific.....	2.1	- 0.5
Upper Mississippi Valley.....	5.0	+ 0.8			

#### RIVERS AND FLOODS.

By Prof. H. C. FRANKENFIELD, in charge River and Flood Division.

The month of August marks the definite inauguration of the low-water season over the greater portion of the country, and during the present month conditions were much accentuated by the persistence of the drought over the northern half of the country from the Atlantic to the Pacific.

In many sections west of the Mississippi River the August stages were the lowest of record, while in the upper Mississippi River the stages, although not unprecedented, were sufficiently low to entirely demoralize navigation above the mouth of the Missouri River. The lower Missouri continued at a fair stage

#### Average temperatures and departures from the normal.

Districts.	Number of stations.	Average temperatures for the current month.	Departures for the current month.	Accumulated departures since January 1.	Average departures since January 1.
New England.....	12	86.2	- 0.9	+13.5	+ 1.7
Middle Atlantic.....	15	71.8	- 0.8	+ 9.0	+ 1.1
South Atlantic.....	10	77.6	- 0.2	+ 2.5	+ 0.3
Florida Peninsula*.....	8	80.9	- 0.6	- 2.9	- 0.4
East Gulf.....	11	80.2	+ 1.0	- 1.0	- 0.1
West Gulf.....	10	82.8	+ 2.0	+ 4.4	+ 0.6
Ohio Valley and Tennessee.....	13	74.4	- 0.4	- 0.7	- 0.1
Lower Lakes.....	10	69.6	+ 0.1	+ 7.3	+ 0.9
Upper Lakes.....	12	66.4	+ 0.4	+19.0	+ 2.4
North Dakota*.....	6	62.7	- 3.6	+23.6	+ 3.0
Upper Mississippi Valley.....	14	73.8	- 0.1	+ 9.9	+ 1.2
Missouri Valley.....	12	73.5	- 1.3	+14.8	+ 1.8
Northern slope.....	9	74.1	- 2.6	+20.4	+ 2.6
Middle slope.....	6	74.8	- 0.4	+15.4	+ 1.9
Southern slope*.....	8	81.5	+ 1.9	+10.9	+ 1.4
Southern Plateau*.....	10	77.3	+ 1.3	+11.6	+ 1.4
Middle Plateau*.....	10	69.3	- 0.3	+10.2	+ 1.3
Northern Plateau*.....	10	65.2	- 2.6	+ 9.5	+ 1.2
North Pacific.....	7	58.4	- 2.7	- 2.2	- 0.3
Middle Pacific.....	7	65.3	- 1.5	- 1.9	- 0.2
South Pacific.....	4	70.4	- 0.1	+ 8.0	+ 1.0

\*Regular Weather Bureau and selected cooperative stations.

#### Average precipitation and departures from the normal.

Districts.	Number of stations.	Average.		Departure.	
		Current month.	Percentage of normal.	Current month.	Accumulated since Jan. 1.
New England.....	11	Inches.		Inches.	Inches.
Middle Atlantic.....	15	2.38	66	- 1.2	- 3.3
South Atlantic.....	11	2.55	59	- 1.8	- 3.8
Florida Peninsula*.....	8	9.00	148	+ 2.9	- 3.5
East Gulf.....	11	3.63	73	- 1.3	- 4.5
West Gulf.....	10	2.12	70	- 0.9	- 5.3
Ohio Valley and Tennessee.....	13	2.01	59	- 1.4	- 1.0
Lower Lakes.....	10	2.47	83	- 0.5	- 1.9
Upper Lakes.....	12	3.41	113	+ 0.4	- 4.7
North Dakota*.....	6	1.61	67	- 0.8	- 6.4
Upper Mississippi Valley.....	15	2.88	91	- 0.3	- 6.7
Missouri Valley.....	12	4.81	141	+ 1.4	- 4.4
Northern slope.....	9	0.83	67	- 0.4	- 2.8
Middle slope.....	6	3.67	149	+ 1.2	- 4.4
Southern slope*.....	8	2.36	96	- 0.1	- 7.9
Southern Plateau*.....	9	1.31	81	- 0.3	- 2.1
Middle Plateau*.....	11	0.55	73	- 0.2	- 4.0
Northern Plateau*.....	10	0.21	41	- 0.3	- 2.7
North Pacific.....	7	0.31	26	- 0.6	- 3.0
Middle Pacific.....	7	0.00	100	0.0	- 5.8
South Pacific.....	4	0.01	100	0.0	- 4.9

\*Regular Weather Bureau and selected cooperative stations

#### Maximum wind velocities.

Stations.	Date.	Velocity.	Direction.	Stations.	Date.	Velocity.	Direction.
Chicago, Ill.....	23	60	ne.	Sioux City, Iowa.....	2	65	n.
Jacksonville, Fla.....	12	56	s.	Do.....	29	54	nw.
Oklahoma, Okla.....	3	52	s.	Toledo, Ohio.....	23	50	s.
Point Reves Light, Cal.....	28	64	nw.	Do.....	25	53	sw.
Roswell, N. Mex.....	13	52	nw.	Williston, N. Dak.....	29	50	w.
Salt Lake City, Utah.....	27	60	w.				

and for this reason only was navigation possible between St. Louis and the mouth of the Ohio River.

More detailed accounts of the low water will be found in the reports of the various district editors.

The effects of the drought were also experienced in the South Atlantic States where low stages prevailed at a time of the year when floods are by no means infrequent. The only semblance of a flood was one that resulted from heavy rains on the last two days of the month over the watershed of the Santee River. These rains caused a rapid rise in the various tributary streams

and on the morning of September 3, the stage of the Wateree River at Camden, S. C., was 25.2 feet, 1.2 foot above the flood stage. Warnings were issued on August 31, and the damage caused by the flood was inconsequential.

The flood service along the lower Rio Grande was reorganized during the month. Gage readings will be made whenever necessary at Eagle Pass, Laredo, and Mission, Tex., and arrangements have been made by the official in charge of the local office of the Weather Bureau at Houston, Tex., for the widespread

dissemination of flood warnings as far south as Brownsville, Tex.

Hydrographs for typical points on several principal rivers are shown on Chart I. The stations selected for charting are Keokuk, St. Louis, Memphis, Vicksburg, and New Orleans, on the Mississippi; Cincinnati and Cairo, on the Ohio; Nashville, on the Cumberland; Johnsonville on the Tennessee; Kansas City on the Missouri; Little Rock on the Arkansas; and Shreveport on the Red.

## SPECIAL PAPERS ON GENERAL METEOROLOGY.

### RECENT ADDITIONS TO THE WEATHER BUREAU LIBRARY.

C. FITZHUGH TALMAN, Librarian.

The following have been selected from among the titles of books recently received, as representing those most likely to be useful to Weather Bureau officials in their meteorological work and studies. Anonymous publications are indicated by a —.

**Ansart-Deusy, A.**

Théorie des mouvements de l'atmosphère et de l'océan. Paris. 1877. 272 p. 8°.

**Baden.** Zentralbureau für Meteorologie und Hydrographie.

Jahresbericht... 1909. Karlsruhe. 1910. 116 p. f°.

Deutsches meteorologisches Jahrbuch. 1909. Karlsruhe. 1910. 76 p. f°.

**British association for the advancement of science.**

Report... Winnipeg: 1909, August 25—September 1. London. 1910. cxliii, 842, [96] p. 8°.

**Brommer, Alois.**

Beiträge zur Kenntniss der atmosphärischen Elektrizität.—XXXII. Das atmosphärische Potentialgefälle in Triest nach den Beobachtungen von November 1902 bis März 1905. Wien. 1909. 73 p. 8°. (K. Akad. Wiss., Wien, math.-nat. Kl., Sitzber., Bd. 118. Abt. IIa. Mai, 1909, p. 629—701.)

**Cape of Good Hope. Meteorological commission.**

Report. 1906. Cape Town. 1907. xvi, 136 p. f°.

Report. 1907. Cape Town. 1908. xiv, 73 p. f°.

Report. 1908. Cape Town. 1909. xii, 53 p. f°.

**Fitzroy, [Robert].**

Le livre du temps. Manuel pratique de météorologie... traduit de l'anglais par M. Mac-Cleod. Paris. n. d. 291 p. 8°.

**Gromadzki, Alexander von.**

Aneroidy i sposób ich badania. (Die Aneroiden und die Methode ihrer Erforschung.) Przemysl. 1905. p. 19-34. 8°.

**Guillaume, Ch.-Ed.**

Traité pratique de la thermométrie de précision. Paris. xvi, 336 p. 1889. 8°.

**Häussler, [Max] Ewald.**

Beziehungen der atmosphärischen Isothermen zu der Massenerhebung der mitteldeutschen Gebirgsschwelle. Halle. 1909. 81 p. 14 chits. 8°. (Inaug.-Diss.—Halle.)

**Ihne, E.**

Phänologische Mitteilungen. (Jhrg. 1909.) Darmstadt. 1910. 35 p. 8°. (S.-A. Arbeiten der Landwirtschaftskammer... Hessen. Hft. 6.)

**Kindler, Fintan.**

Das Wetter. Eine elementare Einführung in die Witterungskunde. Köln. 1909. 142 p. 24°. (Benzigers Naturwiss. Bibliot.)

**Koch, Wilhelm.**

William Thomsons Skala der absoluten Temperatur. Hamburg. 1909. 25 p. 8°.

**König, Willi.**

Untersuchungen über den trockenen und heißen Sommer des Jahres 1904. [Berlin]. n. d. 128 p. 4°. (Inaug.-Diss.—Berlin.)

**Lallayeaux d'Ormay.**

Analyse expérimentale du tourbillon et des trombes marines. Paris. n. d. 43 p. 8°.

**Macfie, Ronald Campbell.**

Air and health. London. [1909.] viii, 345 p. 8°.

**Maryland. Weather service.**

Plant life of Maryland. Baltimore. 1910. 533 p. 4°. (Maryland weather service. v. 3.) [Chapter 1 discusses the relations between the plant life and the climate of Maryland; gives a brief bibliography.]

**Meyer, Kirstine.**

Temperaturbegrebets udvikling gennem Tiderne samt dets Sammenhæng med vekslende Forestillinger om Varmens Natur. Köbenhavn. 1909. vi, 192 p. 8°. (Inaug.-Diss.—Köbenhavn.)

**Mill, Hugh Robert.**

British rainfall... v. 49. 1909. London. 1910. 428 p. 8°.

dissemination of flood warnings as far south as Brownsville, Tex.

Hydrographs for typical points on several principal rivers are shown on Chart I. The stations selected for charting are Keokuk, St. Louis, Memphis, Vicksburg, and New Orleans, on the Mississippi; Cincinnati and Cairo, on the Ohio; Nashville, on the Cumberland; Johnsonville on the Tennessee; Kansas City on the Missouri; Little Rock on the Arkansas; and Shreveport on the Red.

## SPECIAL PAPERS ON GENERAL METEOROLOGY.

**Miquel, P.**

Des organismes vivants de l'atmosphère. Paris. 1883. iv, 312 p. 4°. (Inaug.-Diss.—Paris.)

**Mission scientifique du Ka-Tanga, 1898—1900.**

Résultats des observations météorologiques effectuées sur le territoire de l'État Indépendant du Congo, du mois d'août 1898 au mois de décembre 1899. Documents... publiés par les soins de A. Lancaster. 17 ème. mémoire. Bruxelles. 1908. iv, 193 p. f°.

**Norway. Norske meteorologiske institut.**

Jahrbuch. 1909. Kristiania. 1910. xii, 121 p. f°.

**Oliver, Miguel Correa.**

Tratado elemental de meteorología. Madrid. 1909. 303 p. 8°. (With a volume of plates, 25 x 34 cm.)

**Osaka (Japan). Osaka meteorological observatory.**

Report. 1909. Pt. 2. Seismological observations in Osaka. Osaka. 1910. 4°.

**Prussia. K. Kriegsministerium.**

Vorschrift über Anlage und Prüfung von Blitzableitern an Militär-Hochbauten. (Bl. V.). Berlin. 1909. iv, 79 p. 8°.

**Pringsheim, E.**

Vorlesungen über die Physik der Sonne. Leipzig, etc. 1910. viii, 435 p. 8°.

**Pollitz, Theodor.**

Die Stürme im südlichen Indischen Ozean. Eine Untersuchung ihrer Häufigkeit, Anfangsrichtung, Dauer, Winddrehung und Luftdruckverhältnisse. Berlin. n. d. 32 p. 4°. (Inaug.-Diss.—Freiburg i. Br.)

**Rouchon, Ulysse.**

Recherches sur les inondations de la Loire supérieure et de ses affluents dans le département de la Haute-Loire. Paris. 1910. xxxiv, 61 p. 8°.

**Schmidt, Curt.**

Die Photographie im Dienste wissenschaftlicher Forschung. Wien, etc. n. d. 223 p. 24°. (Naturwiss. Taschenbibliothek. 3te. Bändchen.)

**Schmitt, Theodor.**

Die Meteorologie und Klimatologie des Albertus Magnus. Bad Dürkheim. 1909. 116 p. 8°. (Inaug.-Diss.—München.)

**Schmitt, Karl.**

Die innere Reibung von Luft und Helium bei tiefen Temperaturen. Halle. 1909. 32 p. 8°. (Inaug.-Diss.—Halle.)

**Schubert, Johann, & Dengler, A.**

Klima und Pflanzenverbreitung im Harz. Eberswalde. 1909. 35 p. 8°.

**Schulz, Paul [August].**

Klimaschwankungen im mittleren Norddeutschland und ihr Einfluss auf die Ernteerträge. Halle. 1907. 55 p. 4°. (Inaug.-Diss.—Halle.)

**Société historique et archéologique des IIIe. et IVe. arrondissements. La cité.**

Les inondations de Paris à travers les ages. (Cité et marais.) Paris. 1910. 49 p. 8°.

**Sweden. Statens meteorologiska centralanstalt.**

Meteorologiska iakttagelser. 1909. v. 51. Upsala, etc. 1910. xii, 157 p. f°.

**Trabert, Wilhelm.**

Meteorologie. 3 te. verbesserte Auflage. Leipzig. 1909. 140 p. 24°. (Sammlung Göschken. N:o 54.)

**Trieste. I. r. osservatorio maritimo.**

Rapporto annuale. 1906. v. 23. Trieste. 1910. 123 p. f°.

**Uebe, Richard.**

Labrador. Eine physiographische und kulturgeographische Skizze. Halle-am-Saar. 1909. 112 p. 8°. (Inaug.-Diss.—Leipzig.)

**Völckers, G.**

Lehrbuch für den Unterricht in den Wetterkunde. Leipzig. 1910. viii, 88 p. 8°.

**Vujevic, P[aul].**

Die Temperaturverhältnisse der untersten Luftsichten. Wien. 1909. 48 p. 8°. (Repr. Kaiserl. Akad. Wiss., Wien, math.-nat. Kl., Sitzber. Bd. 118, Abt. IIa. Juli, 1909. p. 971-1018).